USGS science for a changing world

Earthquake Shaking Green Alert

GSN USAID FROM THE AMERICAN PEOPLE ANSS

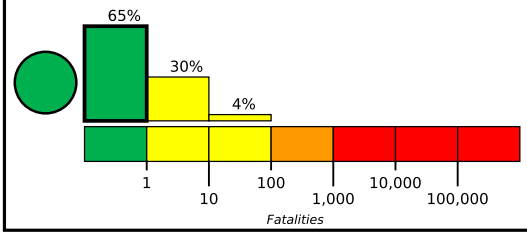
M 6.2, 62 km ENE of Barcelona, Philippines

Origin Time: 2023-12-02 18:09:26 UTC (Sun 02:09:26 local)
Location: 8.4439° N 126.9194° E Depth: 54.9 km

PAGER Version 3

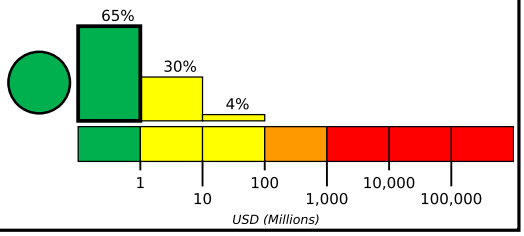
Created: 2 hours, 4 minutes after earthquake

Estimated Fatalities



Green alert for shaking-related fatalities and economic losses. There is a low likelihood of casualties and damage.

Estimated Economic Losses

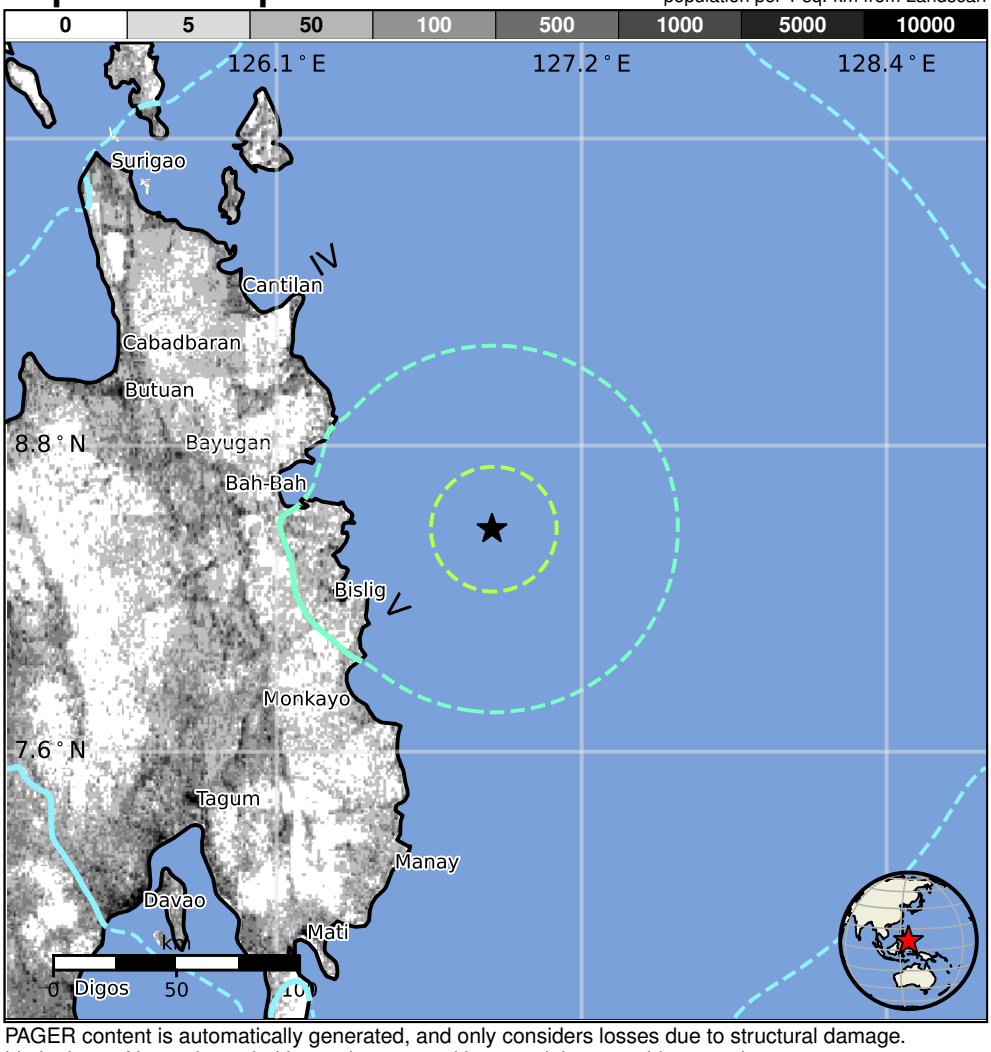


Estimated Population Exposed to Earthquake Shaking

ESTIMATED POPULATION EXPOSURE (k=x1000)		–*	740k*	7,551k	276k	0	0	0	0	0
ESTIMATED MODIFIED MERCALLI INTENSITY		I	II-III	IV	V	VI	VII	VIII	IX	X+
PERCEIVED SHAKING		Not felt	Weak	Light	Moderate	Strong	Very Strong	Severe	Violent	Extreme
POTENTIAL DAMAGE	Resistant Structures	None	None	None	V. Light	Light	Moderate	Mod./Heavy	Heavy	V. Heavy
	Vulnerable Structures	None	None	None	Light	Moderate	Mod./Heavy	Heavy	V. Heavy	V. Heavy

*Estimated exposure only includes population within the map area.

Population Exposure



Structures

Overall, the population in this region resides in structures that are a mix of vulnerable and earthquake resistant construction. The predominant vulnerable building types are unknown/miscellaneous types and heavy wood frame construction.

Historical Earthquakes

Date (UTC)	Dist. (km)	Mag.	Max MMI(#)	Shaking Deaths
1987-05-23	165	5.7	VII(70k)	1
1990-02-08	291	6.7	VIII(96k)	1
1989-12-15	26	7.5	VIII(1k)	2

Selected City Exposure

from GeoNames.org

MMI	City	Population
V	Hinatuan	10k
V	**Bislig**	**68k**
V	Tidman	3k
V	Barcelona	4k
V	Bigaan	3k
V	Loyola	3k
IV	**Butuan**	**310k**
IV	Libertad	250k
IV	Magugpo	233k
IV	**Davao**	**1,213k**
IV	**Digos**	**116k**

bold cities appear on map. (k=x1000)

PAGER content is automatically generated, and only considers losses due to structural damage. Limitations of input data, shaking estimates, and loss models may add uncertainty.

https://earthquake.usgs.gov/earthquakes/eventpage/us7000lfkh#pager

Event ID: us7000lfkh